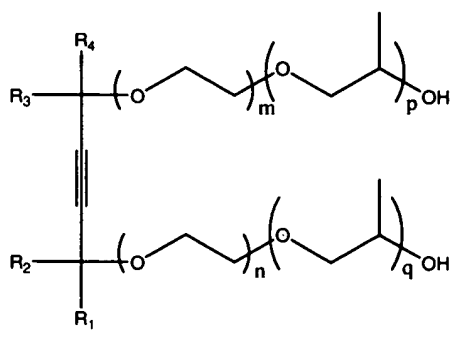
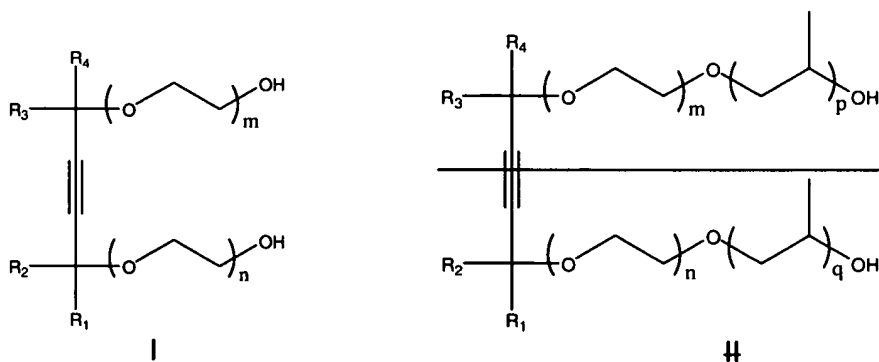


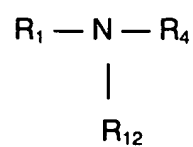
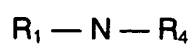
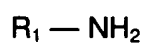
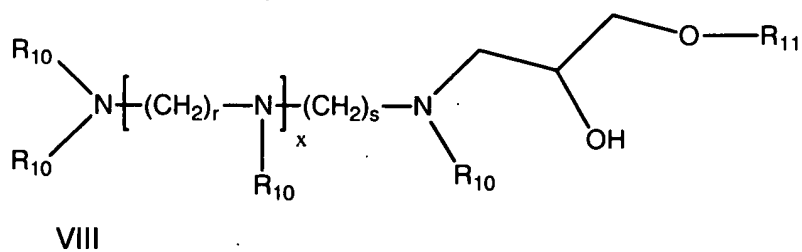
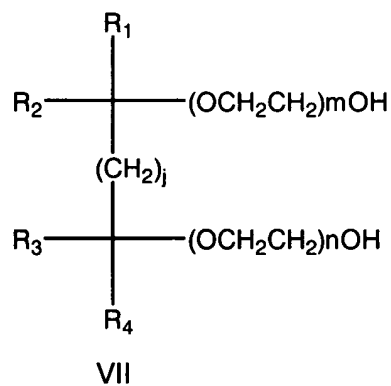
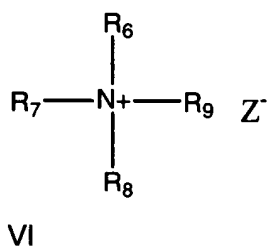
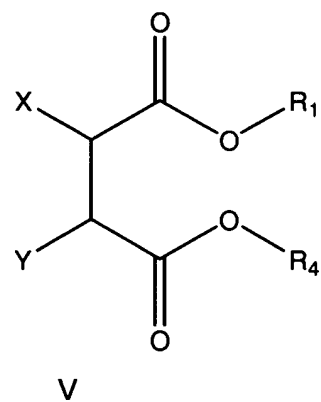
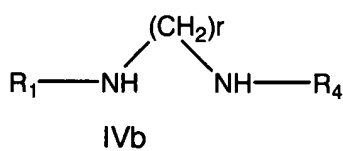
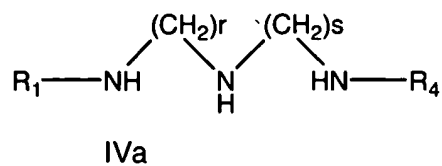
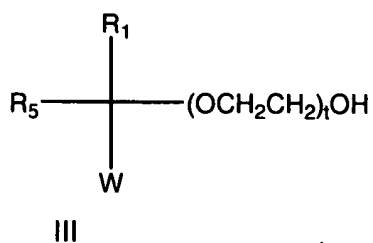
Amendments to the Specification

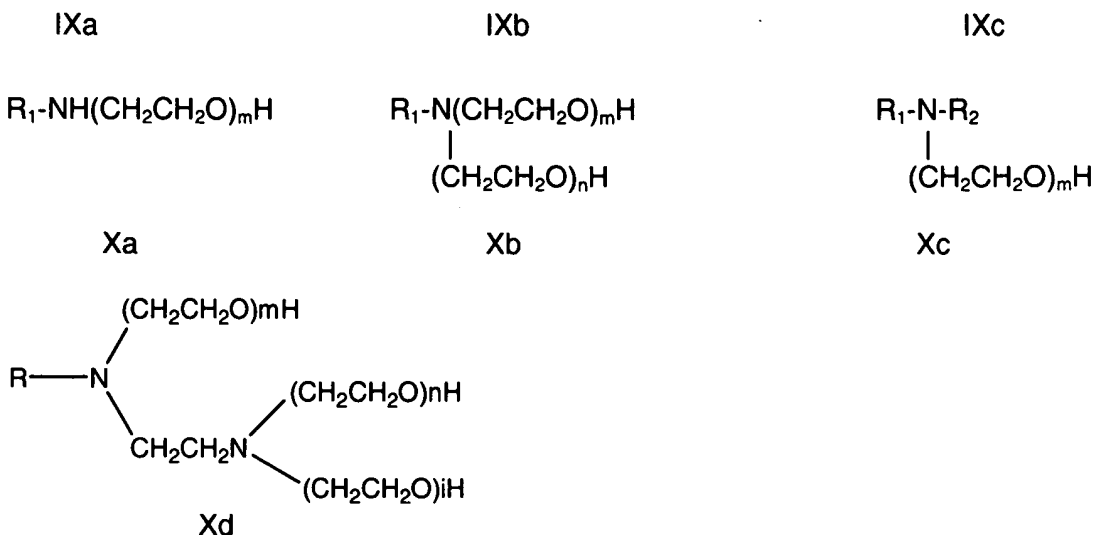
Please replace paragraph [002] at page 7 of the specification with the following new paragraph [0022]:

[0022] The present invention satisfies some, if not all, of the needs of the art by providing a process solution and methods for using same. Specifically, in one aspect of the present invention, there is provided a method for reducing defects in the manufacture of semiconductor devices. The method comprises: providing a substrate comprising a photoresist coating; exposing the substrate to a radiation source to form a pattern on the photoresist coating; applying a developer solution to the substrate to form a patterned photoresist coating; optionally rinsing the substrate with deionized water; and contacting the substrate with a process solution comprising a solvent and 10 ppm to about 10,000 ppm of at least one surfactant having the formula (I), (II), (III), (IVa), (IVb), (V), (VI), (VII), (VIII), (IXa), (IXb), (IXc), (Xa), (Xb), (Xc), or (Xd):

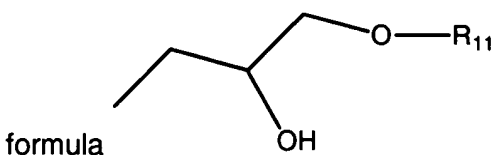


II





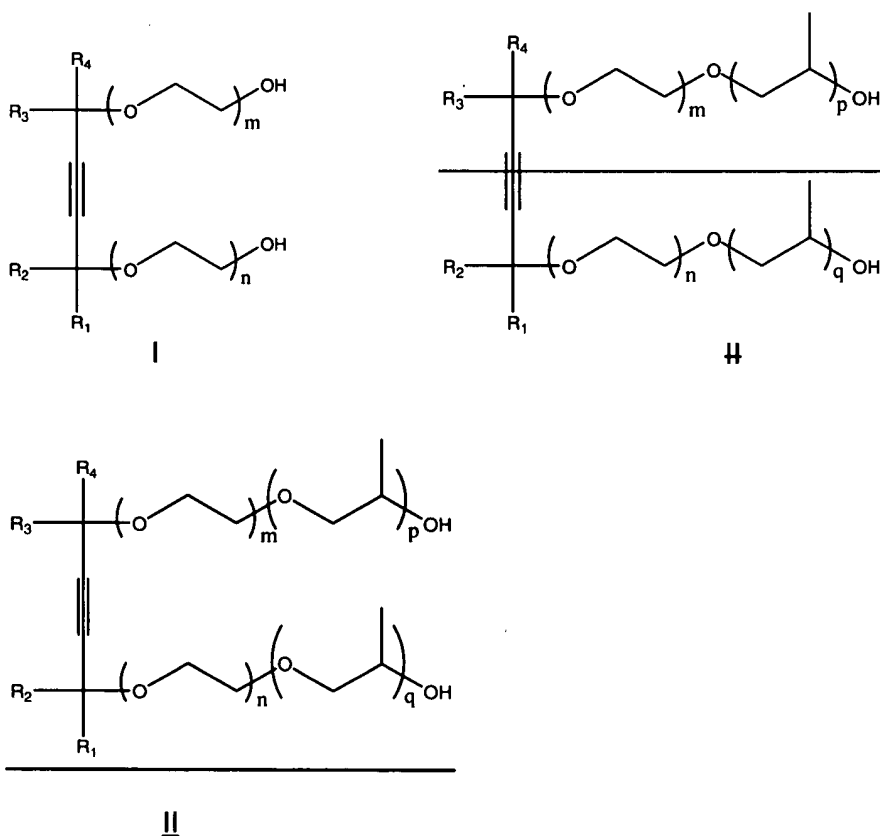
wherein R, R₁, R₄, and R₁₂ are each independently a straight, a branched, or a cyclical alkyl group having from 2 to 250, or from 3 to 10 carbon atoms; R₂ and R₃ are each independently a hydrogen atom or an alkyl group having from 1 to 10 or from 1 to 5 carbon atoms; R₅ is a straight, a branched, or a cyclic alkyl group having from 1 to 10 carbon atoms; R₆ is a straight, a branched, or a cyclic alkyl group having from 4 to 16 carbon atoms; R₇, R₈, and R₉ are each independently a straight, a branched, or a cyclic alkyl group having from 1 to 6 carbon atoms; R₁₀ is independently H or a group represented by the following



having from 4 to 22 carbon atoms; W is a hydrogen atom or an alkynyl group; X and Y are each independently a hydrogen atom or a hydroxyl group; Z is a halide atom, a hydroxyl group, an acetate group, or a carboxylate group; i, m, n, p, and q are each independently a number that ranges from 0 to 20; r and s are each independently 2 or 3; t is a number that ranges from 0 to 2; j is a number between 1 to 5; and x is a number that ranges from 1 to 6.

Please replace paragraph [0035] at page 13 of the specification with the following new paragraph [0035]:

[0035] In certain embodiments of the present invention, the process solution may contain one or more nonionic surfactants that are acetylenic diol derivatives. The surfactants of the present invention may be represented by the following formula I or formula II:



wherein R_1 and R_4 are each independently a straight or a branched alkyl chain having from 3 to 10 carbon atoms; R_2 and R_3 are each independently a hydrogen atom or an alkyl chain having from 1 to 5 carbon atoms; and i , m , n , p , and q are each independently a number that ranges from 0 to 20. The surfactants are commercially available from Air Products and Chemicals, Inc. of Allentown, PA, the assignee of the present invention, under the trade names SURFYNOL® and DYNOL®. In certain preferred embodiments, the acetylenic diol

Appl. No. 10/804,513

portion of the molecule of formulas I or II is 2,4,5,9-tetramethyl-5-decyne-4,7-diol or 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol. The acetylenic diol derived surfactants may be prepared in a number of ways including the methods described, for example, in U. S. Pat. No. 6,313,182 and EP 1115035A1 which are assigned to the assignee of the present invention and incorporated herein by reference in their entirety.